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09/370,724

08/07/1999

BABAK NADER

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10/10/2006

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EXAMINER

ELALLAM, AHMED

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/370,724

Applicant(s)

NADER ET AL.

Examiner

AHMED ELALLAM

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This communication is responsive to RCE filed on 08/07/2006.

Claims 1-21 are pending.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liese et al, US (5,854,889) in view of Mann, US (6,618,854). Hereinafter referred to respectively as Liese and Mann.

Regarding claim 1, with reference to figures 1 and 2, Liese discloses:

- a network under test 20;
- custom servers (ISDN custom server 22, CG custom server, ...) that execute test cases, see column 3, lines 9-28, (Claimed at least one probe network device coupled to the network under test, the at least one probe network device configured to host at least one task type);
- Execution server 16 coupled to the custom servers (claimed an NVT server coupled to the at least one probe network device); wherein

- a user at the network under test communicates to a client machine which test or test cases are to be executed by the custom servers, the test or test cases can be edited before transmission to the execution server 16 which coordinates the execution of test cases by the custom servers, see column 3, lines 9-47. Liese further discloses that the client machine 32 includes a GUI (Graphical User Interface) that provides an interface for managing test cases (e.g. create, change delete, store access...), see column 3, lines 29-47. Liese also discloses that the client machine may access and drive one or more custom servers deployed on a network via an execution server to perform any test capable of being performed on the network. See column 5, lines 55-59. The execution server ensures the user logged into the client machine can access and drive a number of custom servers, column 7, lines 6-9. Liese further discloses supplying the edited test case to the execution server, see column 8, lines 14-18.

The difference between Liese and claim 1 is that Liese doesn't specify the execution server (claimed NVT server) is configured to translate parameters entered by a user to instruction executable by at least one customer server, and to transmit the instructions to at least one of custom servers to execute the at least one of the test cases).

However, with reference to figures 4 and 5, Mann discloses a client device connected to a WEB server 406, the web server (also called host computer) configured for translating a source code user program into object code (claimed executable

instructions) for execution by the target processor, the target processor hosting a test, see column 7, lines 10-61 and column 8, lines 31-44.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the translation of parameters by the execution server into executable instructions to be executed by respective custom servers in the system of Liese as taught by Mann. The system of Liese can be modified by configuring the execution server to translate the parameters entered by Liese into executable instructions for transmission to a specific custom server for the respective test case for execution. The advantage would be the ability to provide the client of Liese with interface programs written in platform independent language making the clients of Liese more versatile in testing the network. (See Mann, column 8, lines 11-14 and column 9, lines 1-10).

Regarding claim 2, with reference to figure 2, Liese shows a client 32 coupled to the execution server 22, wherein client 32 includes a GUI (Graphical User Interface) that provides an interface for managing test cases (e.g. create, change delete, store access...), see column 3, lines 29-47. Liese further discloses supplying the edited test case to the execution server, see column 8, lines 14-18. (Claimed an NVT client coupled to the NVT server, wherein the NVT client is configured to provide the template to the user for entering the parameters, and the NVT client is configured to transmit the parameters to the NVT server)

Regarding claim 3, with reference to figure 2, Liese shows that the execution server is coupled through the bus 12 (claimed Ethernet control network) to the custom servers (claimed at least one probe network device).

Liese doesn't disclose a communication server between the bus (Ethernet control network) and the custom servers (claimed at least one probe network device).

However, Applicants disclose that the communication server couples probe network devices to the control network 12., and that the NVT server is coupled to control network and communicates through communication server to network probes. See specification page 8, lines 11-15. (Examiner interpreted the function of such arrangement (communication server and the NVT server) as being the same function of Liese Execution server, since the execution server couples the bus and the custom servers).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make the direct connection of Liese in view of Mann' execution server to the custom servers through another server (communication server) so that scalability to the number of customer servers to that of execution server can be provided if a need arises.

Regarding claim 4, Liese discloses that a custom server is CG server (call generator), see column 3, lines 17-19, column 6, lines 34-35. (Claimed one task type includes a traffic generator).

Regarding claim 9, with reference to figures 1 and 2, Liese discloses a method for testing a network, comprising:

- providing a test network 20 having custom servers (ISDN custom server 22, CG custom server, ...) that execute test cases, see column 3, lines 9-28, (Claimed providing a test network comprising a probe network device hosting a task type and further coupled to the probe network device);
- providing an Execution server 16 coupled to one of the custom servers (probe network device) (claimed providing a NVT server coupled to the probe network device);
- a user in the network under test communicates to a client machine which test or test cases are to be executed by the custom server(s), the test or test cases can be edited before transmission to the execution server 16 which coordinates the execution of test cases by the custom servers, see column 3, lines 9-47 (claimed entering the parameters for a task of the task type into a template and executing the task type instructions associated with the at least one task on the at least one probe network device in order to form a process),. Liese also discloses that the execution server conveys protocols for successful completion of test request to custom servers that performs the requested tests, see column 4, lines 19-23. Execution Server 16 probes a test request generated by Client Machine 32 and routes that test request to the appropriate Custom Server(s) which actually performs the requested test case. See column 3, lines 29-47 and column 7, lines 9-12.

- Providing the user with the test results, see column 3, lines 48-63. (Examiner interpreted the provisioning of test results to the user as being the claimed monitoring the test network in order to determine performance).

The difference between Liese and claim 9 is that while Liese discloses conveying protocols by the execution server for successful completion of test request to custom servers that performs the requested tests, but it doesn't explicitly specify translating by the customer server the parameters into instructions executable by the probe network device. (Claimed translating by the NVT server the parameters into instructions executable by the probe network device).

However, with reference to figures 4 and 5, Mann discloses a client device connected to a WEB server 406, the web server (also called host computer) configured for translating a source code user program into object code (claimed executable instructions) for execution by the target processor, the target processor hosting a test, see column 7, lines 10-61 and column 8, lines 31-44.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the translation of parameters by the execution server into executable instructions to be executed by respective custom servers in the system of Liese as taught by Mann. The system of Liese can be modified by configuring the execution server to translate the parameters entered by Liese into executable instructions for transmission to a specific custom server for the respective test case for execution. The advantage would be the ability to provide the client of Liese with interface programs written in platform independent language making the clients of



Liese more versatile in testing the network. (See Mann, column 8, lines 11-14 and column 9, lines 1-10).

Regarding claim 5 and 12, Liese in view of Mann discloses substantially all the claim limitation of respective parent claims 4 and 11, further Liese discloses that all types of tests which can be performed in telecommunications are accomplished with a plethora of applications, systems, test case types, and methods, see column 2, lines 40-43. Liese in view of Mann do not specify that the call generator server (claimed traffic generator) is compatible with at least one combination of a protocol, a media and an encapsulation, wherein the protocol is selected from the group consisting of IP, IPX, CLNS, Decnet, XNS, AppleTalk, VINES, TCP, UDP, ICMP, and IGMP; the media is selected from the group consisting of Ethernet, FDDI, Serial and Token Ring; and the encapsulation is selected from the group consisting of ARPA, SNAP, SAP, Novell-Ether and HDLC.

However, Examiner take official notice that traffic generators having the feature claimed are well known in the art. It would have been obvious to a person of ordinary skill in the art to make the call generator of Liese in view of Mann being compatible with at least one combination of a protocol, a media and an encapsulation, wherein the protocol is selected from the group consisting of IP, IPX, CLNS, Decnet, XNS, AppleTalk, VINES, TCP, UDP, ICMP, and IGMP; the media is selected from the group consisting of Ethernet, FDDI, Serial and Token Ring; and the encapsulation is selected from the group consisting of ARPA, SNAP, SAP, Novell-Ether and HDLC so to provide versatility in call generators testing of Liese in view of Mann. The advantage would be

the ability to use the system/method of Liese in view of Mann to test different traffic patterns of heterogeneous networks.

Regarding claims 6, 13, Liese in view of Mann discloses substantially all the limitations of respective parent claims 4 and 11, further Liese discloses that all types of tests which can be performed in telecommunications are accomplished with a plethora of applications, systems, test case types, and methods, see column 2, lines 40-43. However Liese in view of Mann not disclose a test case being a session emulator task, wherein the session emulator task type is selected from the group consisting of a multi-protocol session emulator, a LLC2 single protocol session emulator, and a SDLC single protocol session emulator.

However Examiner take official notice that these session emulations are well known in the art.

Therefore, it would have been obvious to a person of ordinary of skill in the art at the time of the invention to enable the system/method of Liese in view of Mann to provide the known session emulations as part test cases so that versatility in session emulation in the system/method of Liese in view of Mann can be provided.

Regarding claims 7, 14, Kenner discloses substantially all the limitations of claim 4 and 11; further Liese discloses that all types of tests which can be performed in telecommunications are accomplished with a plethora of applications, systems, test case types, and methods, see column 2, lines 40-43. However Liese in view of Mann do not disclose the task type being large network emulator task type selected from the group consisting of a BGP large network emulator, a EIGRP large network emulator, an

IP RIP large network emulator, an IPX RIP large network emulator and an OSPF large network emulator.

However Examiner takes official notice that these large network emulator task types are well known in the art.

Therefore, it would have been obvious to a person of ordinary of skill in the art at the time of the invention was made to provide the system/method of Liese in view of Mann with the capability of providing these network emulations as part of the test cases so to adapt to different known network emulations techniques.

Regarding claims 8 and 15, Liese discloses substantially all the limitations of respective parent claims 4 and 11, further Liese discloses that all types of tests which can be performed in telecommunications are accomplished with a plethora of applications, systems, test case types, and methods, see column 2, lines 40-43.

However Liese in view of Mann do not explicitly disclose the task case (claimed task type) is device query task type and selected from the group consisting of a query CPU, a query memory, a query IP route, a query BGP task, a query EIGRP task, a query OSPF task, a query multi-protocol session task, a query LLC2 single-protocol session task, a query SDLC single-protocol session task, and a query traffic analyzer task.

However Examiner takes official notice that these device query task types are well known in the art.

Therefore, it would have been obvious to an ordinary person of skill in the art at the time of the invention to provide the system/method of Liese in view of Mann with the well known device query task types so that the custom servers of Liese in view of Mann

can carry out testing encompassing a variety of network devices and protocols. The advantage would be the ability to adapt the system/method of Liese in view of Mann to different network environment testing.

Regarding claim 10, Liese discloses entering the parameters for a test case among a plurality of test cases includes

- a client machine 32 (claimed NVT client) coupled to the execution server 16 (claimed coupling an NVT client to the NVT server);
- retrieving test cases by the client machine, See column 3, lines 38-39, (claimed transmitting a collection of templates corresponding to the task type to the NVT client);
- managing test cases (templates) (e.g. create, change delete, store access...), see column 3, lines 19-26 and column 3, lines 29-47, (claimed entering parameters into at least one of the collection of templates to form the task);
- communicating the test case information to the execution server, see column 3, lines 19-26. (Claimed transmitting the task to the NVT server).

Regarding claim 11, Liese discloses that a custom server is CG server (call generator), see column 3, lines 17-19, column 6, lines 34-35.

Regarding claim 16, Liese doesn't disclose that the client and custom server coupled through the Internet and the templates and the task are transmitted using JAVA/HTML.

However, with reference to figure 4, Mann discloses an Internet connection 404 between the remote terminal (client) and the computer server, wherein the programs to

be tested are transmitted using JAVA, see column 8, lines 11-14, and column 9, lines 1-9.

Therefore, it would have been obvious to a person of ordinary of skill in the art at the time the invention was made to implement the JAVA protocol along the Internet connection as taught by Mann in lieu of the client/server architecture of Liese so that Liese testing apparatus/method be adapted to an Internet environment. The advantage would be using the known JAVA browsing in carrying out the testing of Liese by downloading the task cases (templates) and carrying remote testing over the Internet.

Regarding claim 17, with reference to figures 1 and 2, Liese discloses: user at the network under test communicates to a client machine which test or test cases are to be executed by custom servers, the test or test cases can be edited before transmission to the execution server 16 which coordinates the execution of test cases by the custom servers, see column 3, lines 9-47. (Claimed forming a task, the task being formed by entering task parameters into a task template). Liese further discloses that the client machine 32 includes a GUI (Graphical User Interface) that provides an interface for managing test cases to be executed by the custom servers (e.g. create, change delete, store access...), see column 3, lines 29-47. Wherein an Execution Server 16 probes a test request generated by Client Machine 32 and routes that test request to the appropriate Custom Server(s) which actually performs the requested test case. See column 7, lines 9-12. Liese also discloses that the execution server conveys protocols for successful completion of test request to custom servers that performs the requested tests.

The difference between Liese and claim 17 is that Liese doesn't explicitly specify translating the task parameters using the execution server to form executable instructions by a custom server, the customer server host a task code for executing the executable instruction.

However, with reference to figures 4 and 5, Mann discloses a client device connected to a WEB server 406, the web server (also called host computer) configured for translating a source code user program into executable instructions for execution by the target processor, see column 7, lines 10-61 and column 8, lines 31-44. (Examiner interpreted the capability of the target processor for executing the executable instructions to read on the claimed the probe network device hosting a task code for executing the executable instructions).

Therefore, it would have been obvious to a person of ordinary of skill in the art at the time the invention was made to implement the translation of parameters by the execution server into executable instructions to be executed by respective custom servers in the system of Liese as taught by Mann. The system of Liese can be modified by configuring the execution server to translate the parameters entered by Liese into executable instructions for transmission to a specific custom server for the respective test case for execution. The advantage would be the ability to provide the client of Liese with interface programs written in platform independent language making the clients of Liese more versatile in testing the network. (See Mann, column 8, lines 11-14 and column 9, lines 1-10).

Regarding claim 18 and 20, Liese discloses that one of the test cases transmitted to one of custom servers, the customer server being CG server (call generator), (see Liese, column 3, lines 17-19, column 6, lines 34-35, but doesn't disclose the test case(s) is/are selected from a group of tasks consisting of a traffic generator, a traffic analyzer, a large network emulator, a session emulator, a device query or a script task.

However, Examiner takes official notice that these tasks are well known in the art.

It would have been obvious to a person of ordinary skill in the art to make the task of Liese in view of Mann being selected from a group of a traffic generator, a traffic analyzer, a large network emulator, a session emulator, a device query or a script task so that the testing system/method of Liese in view of Mann can be used in a variety of network testing.

Regarding claim 19, with reference to figures 1 and 2, Liese discloses:

a user at the network under test communicates to a client machine which test or test cases are to be executed (claimed sending task templates to a user) by the custom servers, the test or test cases can be edited before transmission to the execution server 16 (claimed receiving tasks formed by the user entering parameters into the task templates) which coordinates the execution of test cases by the custom servers, see column 3, lines 9-47. Liese also discloses that the execution server conveys protocols for successful completion of test request to custom servers that performs the requested tests. See column 3, lines 29-47, and column 4, lines 19-23.

The difference between Liese and claim 20 is that Liese doesn't explicitly disclose translating the task to a task code configured to be executed by one or more custom servers. (claimed translating the tasks to task code configured to be executed by one ore more probe network devices).

However, with reference to figures 4 and 5, Mann discloses a client device connected to a WEB server 406, the web server (also called host computer) configured for translating a source code user program into executable instructions for execution by the target processor, see column 7, lines 10-61 and column 8, lines 31-44.

Therefore, it would have been obvious to a person of ordinary of skill in the art at the time the invention was made to implement the translation of parameters by the execution server into executable instructions to be executed by respective custom servers in the system of Liese as taught by Mann. The system of Liese can be modified by configuring the execution server to translate the parameters entered by Liese into executable instructions for transmission to a specific custom server for the respective test case for execution. The advantage would be the ability to provide the client of Liese with interface programs written in platform independent language making the clients of Liese more versatile in testing the network. (See Mann, column 8, lines 11-14 and column 9, lines 1-10).

Regarding claim 21, as indicated above with reference to parent claim 2, Liese discloses client 32 includes a GUI (Graphical User Interface) that provides an interface for managing test cases (e.g. create, change delete, store access...), and supplying the edited test case to the execution server, see column 8, lines 14-18. Liese further



discloses the user retrieves tests cases to be edited (claimed collection of templates) from different locations such as local memory or shared storage, see column 3, lines 48-50, column 7, lines 49-60.

The difference between Liese and claim 21 is that Liese doesn't specify retrieving the test cases (collection of templates) by the execution server. (Claimed the NVT server is configured to transmit a collection of templates to the NVT client).

However, Mann discloses downloading from the host computer (claimed NVT server as discussed in the base claim 1 above) an interface program on a local computer for setting test parameters, see figure 5, steps 512-516, and column 9, lines 4-9.

Therefore it would have been obvious to a person of ordinary skill in the art, at the time the invention was made to modify the system of Liese of templates collection provisioning by the execution server in stead of the shared database as indicated by Mann so to localize both the management of the customer servers and shared database. The advantage would be the ability to locally monitor and trouble-shoot the execution server of Liese in view of Mann.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

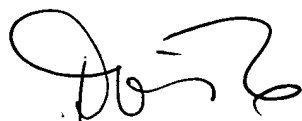
***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, To Doris can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A. ELALLAM  
Examiner  
Art Unit 2616  
October 1, 2006

  
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SUPERVISORY PATENT EXAMINER  
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